UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS

P O Box 1450 Alexandria, Virgima 22313-1450 www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

37462 7590 06/02/2010

LANDO & ANASTASI, LLP ONE MAIN STREET, SUITE 1100 CAMBRIDGE, MA 02142 EXAMINER

KIM, ALEXANDER D

ART UNIT PAPER NUMBER

1656 DATE MAILED: 06/02/2010

 APPLICATION NO.
 FILING DATE
 FIRST NAMED INVENTOR
 ATTORNEY DOCKET NO.
 CONFRMATION NO.

 10/034/950
 12/26/2001
 Bhami Shnoy
 A2039-701110
 9344

 $\hbox{TITLE OF INVENTION: CRYSTALS OF WHOLE ANTIBODIES AND FRAGMENTS THEREOF AND METHODS FOR MAKING AND USING THEM \\$

| APPLN. TYPE | SMALL ENTITY | ISSUE FEE DUE | PUBLICATION FEE DUE | PREV. PAID ISSUE FEE | TOTAL FEE(S) DUE | DATE DUE |
|----------------|--------------|---------------|---------------------|----------------------|------------------|------------|
| nonprovisional | YES | \$755 | \$300 | \$0 | \$1055 | 09/02/2010 |

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and I/2 the ISSUE FIEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450

or Fax (571)-273-2885

| appropriate. All further indicated unless corrects maintenance fee notifica | correspondence includir ed below or directed oth | or transmitting the 1880 ig the Patent, advance of herwise in Block 1, by (a | rders and notification of r a) specifying a new corres | naintenance fees w pondence address; | ill be and/or | mailed to the current (b) indicating a sepa | correspondence address a arate "FEE ADDRESS" fo |
|--|--|--|--|--|---|--|---|
| | | ock 1 for any change of address) | Note Feet pags have | e: A certificate of a s) Transmittal. This ers. Each additional its own certificate | mailing s certil paper of mai | can only be used for icate cannot be used for such as an assignment ling or transmission. | or domestic mailings of the for any other accompanying int or formal drawing, must |
| 37462 LANDO & AN ONE MAIN STI CAMBRIDGE, | REET, SUITE 1100 | | | Cont | ificate | of Mailing or Trans | |
| | | | | | | | (Depositor's name) |
| | | | | | | | (Signature) |
| | | | | | | | (Date) |
| APPLICATION NO. | FILING DATE | | FIRST NAMED INVENTOR | | ATTO | RNEY DOCKET NO. | CONFIRMATION NO. |
| 10/034,950 TITLE OF INVENTION | 12/26/200I : CRYSTALS OF WHO | LE ANTIBODIES AND | Bhami Shenoy FRAGMENTS THEREOF | AND METHODS | | A2039-701110 MAKING AND USIN | 9344 G THEM |
| APPLN, TYPE | SMALL ENTITY | ISSUE FEE DUE | PUBLICATION FEE DUE | PREV. PAID ISSUE | FEE | TOTAL FEE(S) DUE | DATE DUE |
| nonprovisional | YES | \$755 | \$300 | \$0 | | \$1055 | 09/02/2010 |
| EXAM | IINER | ART UNIT | CLASS-SUBCLASS | | | | |
| KIM, ALEX | KANDER D | 1656 | 424-130100 | | | | |
| "Fee Address" ind PTO/SB/47; Rev 03-0 Number is required. 3. ASSIGNEE NAME A | ondence address (or Cha 8/122) attached. ication (or "Fee Address 12 or more recent) attach ND RESIDENCE DATZ less an assignce is ident h in 37 CFR 3.II. Comp | nge of Correspondence Indication form ed. Use of a Customer A TO BE PRINTED ON | 2. For printing on the p (1) the names of up to or agents OR, alternati (2) the name of a singl registered attorney or a 2 registered patent atto listed, no name will be THE PATENT (print or ty data will appear on the p f7 a substitute for filing an (B) RESIDENCE: (CITY | 3 registered patent rely, e firm (having as a sgent) and the name meys or agents. If a printed. te) tet | membes of u | er a 2p to p to se is 3 | ocument has been filed for |
| Please check the appropr | iate assignee category or | categories (will not be pa | rinted on the patent): | Individual 🚨 Co | rporati | on or other private gro | oup entity Government |
| 4a. The following fee(s) Issue Fee Publication Fee (N | vo small entity discount p | | b. Payment of Fee(s): (Plea A check is enclosed. Payment by credit car The Director is hereby overpayment, to Depo | d. Form PTO-2038 | is atta | ched. | shown above) ficiency, or credit any n extra copy of this form). |
| - 11 | s SMALL ENTITY state | is. See 37 CFR 1.27. | ☐ b. Applicant is no lon | | | | |
| NOTE: The Issue Fee an interest as shown by the | d Publication Fee (if req records of the United Sta | uired) will not be accepte tes Patent and Trademark | d from anyone other than t Office. | he applicant; a regi | stered a | attorney or agent; or th | ne assignee or other party ir |
| Authorized Signature | | | | Date | | | |
| Typed or printed name | | | | Registration N | o | | |
| This collection of inform an application. Confiden submitting the complete this form and/or suggests Box 1450, Alexandria, V Alexandria, Virginia 223 | nation is required by 37 C tiality is governed by 35 d application form to the ions for reducing this but 'irginia 22313-1450. DC k13-1450. | FR 1.311. The informatic U.S.C. 122 and 37 CFR USPTO. Time will vary rden, should be sent to the ONOT SEND FEES OR | on is required to obtain or r 1.14. This collection is est r depending upon the indiv e Chief Information Office COMPLETED FORMS TO | etain a benefit by the imated to take 12 n idual case. Any co r, U.S. Patent and O'THIS ADDRESS | ne publ ninutes mment Fraden . SENI | ic which is to file (and to complete, includir s on the amount of ti- nark Office, U.S. Dep D TO: Commissioner | d by the USPTO to process in gathering, preparing, and me you require to complete artment of Commerce, P.O for Patents, P.O. Box 1450 |

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS

P O Box 1450 Alexandra, Virgima 22313-1450 www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. | | |
|--|----------------|----------------------|-----------------------|------------------|--|--|
| 10/034,950 | 12/26/2001 | Bhami Shenoy | A2039-701110 | 9344 | | |
| 37462 | 590 06/02/2010 | | EXAMINER | | | |
| LANDO & ANASTASI, LLP ONE MAIN STREET, SUITE 1100 | | | KIM, ALEXANDER D | | | |
| | | | ART UNIT PAPER NUMBER | | | |
| CAMBRIDGE, M | IA 02142 | | 1656 | | | |

DATE MAILED: 06/02/2010

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 0 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 0 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability

| Application No. | Applicant(s) | |
|------------------|---------------|--|
| 10/034,950 | SHENOY ET AL. | |
| Examiner | Art Unit | |
| ALEVANDED D. KIM | 1656 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--All claims being allowable. PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS. This application is subject to withdrawal from issue at the initiative

- of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.
- This communication is responsive to the amendment filed on 03/02/2010.
- The allowed claim(s) is/are 95-135.
- 3. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - b) \(\subseteq \text{Some* c} \subseteq \subseteq \text{None of the:} \) a) \square All
 - 1. T Certified copies of the priority documents have been received.
 - 2. Certified copies of the priority documents have been received in Application No.
 - 3. Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

- A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
- CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) Including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) hereto or 2) to Paper No./Mail Date
 - (b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6.

DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- 1. | Notice of References Cited (PTO-892)
- Notice of Draftperson's Patent Drawing Review (PTO-948)
- Information Disclosure Statements (PTO/SB/08). Paper No./Mail Date 12/10/2009
- 4. T Examiner's Comment Regarding Requirement for Deposit of Biological Material
- 5. Notice of Informal Patent Application
- Interview Summary (PTO-413), Paper No./Mail Date
- 7. X Examiner's Amendment/Comment
- 8. X Examiner's Statement of Reasons for Allowance
- 9. ☐ Other

Application/Control Number: 10/034,950 Page 2

Art Unit: 1656

DETAILED ACTION

Application Status

 In response to the previous Office action, a Non-Final rejection (mailed on 09/03/2009), Applicants filed a response and amendment received on 03/02/2010. In said amendment, claims 1-94 and 136-138 are canceled. Claims 95-135 are pending.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 12/10/2009 was filed after the mailing date of the Non-Final rejection mailed on 09/03/2009 after the filing of a request for continued examination on 6/4/09. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Examiner's amendment to the Claims

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment shown below was given in a telephone interview with Natalie Lissy on May 18, 2010. Replace claim 129 of the claim listing filed on 03/02/2010 with the following re-written claim.

Application/Control Number: 10/034,950 Page 3

Art Unit: 1656

Claim 129. The method of claim 127, wherein the pH of the Tris buffer is 8.5.

Statement of Reasons for Allowance

4. Claims 95-135 are allowed. The following is an examiner's statement of reasons for allowance:

The instant invention is drawn to a crystal of infliximab comprising infliximab and specific components as recited in claims 95, 105, 115 and 125 and methods of preparing such infliximab crystals in claims 97, 107, 117 and 127; wherein infliximab is an antibody that was well-known at the time of instant invention. The specification discloses working examples that correspond to each of the recited crystals and methods as encompassed by the claims (see, e.g., specification at pp. 98-99).

The claimed infliximab crystals (and methods of preparing said infliximab crystals) are novel and unobvious in view of the non-infliximab components of the crystals (e.g., ethoxyethanol, lithium sulfate, and Tris buffer in claim 95), which crystals are useful for biomedical applications such as delivering large amounts of antibody in a small volume; it can be used to slow release infliximab antibody, for example.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance.

Application/Control Number: 10/034,950 Page 4

Art Unit: 1656

Conclusion

 Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALEXANDER D. KIM whose telephone number is (571)272-5266. The examiner can normally be reached on 10AM-6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Manjunath Rao can be reached on (571) 272-0939. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Alexander D Kim/ Examiner, Art Unit 1656

/David J. Steadman/ Primary Examiner, Art Unit 1656